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ORIGINAL ARTICLES.

SOME SYPHILITIC LESIONS OF THE EYE.

The Brows, Lashes, Lachrymal Apparatus, Lids, Conjunctiva, Sclera, Cornea and Orbit.

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It has been urged that the ocular lesions occurring in syphilitic subjects are due rather to the effects of debility and altered nutrition than to the action of the specific poison. Although it is possible that some eye affections happening in the course of constitutional syphilis arise through a lowered condition of the bodily functions, the same as in other cachectic states, still, the weight of evidence from the researches of observers in the last decade is in favor of a specific cause acting locally through vascular mediation. A diagnosis of syphilis is usually made only upon the co-existence or history of a number of symptoms peculiar to that diathesis. Yet, even in the absence of other corroborative evidence, some of the following conditions of the organ of vision are strong indications, if not positive proof, of venereal disease. The imprint of syphilis may appear as any form of inflammatory action in any of the structures of the eye. Lesions occur at all periods of acquired syphilis and are common in congenital disease. As the skin and mucous membranes are peculiarly susceptible to luetic inflammation, wounds and bruises or ulcerations are apt to become infiltrated and are very slowly healed. [Bumstead.][11] The syphilitic dyscrasia is prejudi-

cial to the success of operations and sad disappointments are met with in these patients. [Noyes.][52]

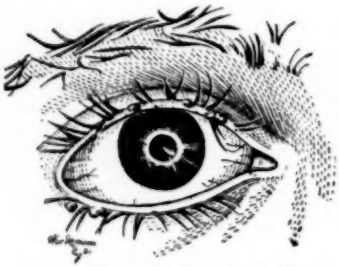

Fig. 1.—*Alopecia Ciliaris et Superciliaris Syphilitica. "Signe d'Omnibus."*

The eyebrows and lashes are sometimes involved in syphilitic tarsitis and in the alopecia of secondary disease. [See Figs. 1–4.] They often undergo a marked change particularly prominent in young people. Instead of being thick and regular, the hairs become thin and stick out in all directions, with bald patches in places. These changes constitute what is known as the *signe d'omnibus*, as a patient is thus rendered diagnosable even in a public vehicle. [Fournier][20] The illustration is from a sketch of a patient in the Fuchs clinic in Vienna who had other secondary manifestations. [See Fig. 1.]

In inherited disease the eyebrows as well as the lashes sometimes fall out. [Smith.][63] A certain number of cases of lachrymal disease are due to syphilis, and where inflammatory affections of this apparatus resist the usual treatment, the cause will frequently be found to be a luetic taint, and the local disease will not be eradicated until the constitutional complaint is attended to. In a few instances the disease is confined to the mucous membrane and the submucous tissue whence it has been propagated by inflammation of the Schneiderian membrane, giving rise to a simple stricture of the lachrymal duct. In the majority of cases the bony wall of the periosteum becomes affected by caries. The symptoms are then those of a severe dacro-cystitis and result in abscess or fistula. Considerable deformity may be produced by destruction of the nasal bones or by ectropion of the lower lid from the cicatricial process.

The following case is typical: A married woman aged 33 came to me for phlegmonous inflammation of the lachrymal sac which had existed about six

months. The disease was on both sides and was accompanied by caries of the lachrymal and nasal bones. She had ozæna for more than a year, and the nasal cavities were in bad shape from ulcerations and caries. There was a coppery discoloration of the skin of the face and neck, enlargement of the cervical lymphatic glands and nodes on the long bones. No history of contagion was given. The local affection was surgically treated and the general condition was attended to with marked benefit.

Dr. Chas. A. Oliver, [75] of Philadelphia kindly sent me the following report of prelachyrmal abscess occuring in a boy aged 13, the sixth child of syphilitic parents, presenting characteristic lesions of hereditary syphilis. He complained of recurrent swellings at the inner angle of the eyes just over the region of the lachrymal ducts which had first appeared on the right side four years previously and on the left side for three weeks only. The lower canaliculi were slit and the swellings incised showing no connection between them. Probes passed into the abscess revealed diseased bone on the right side. Free drainage, antiseptic washing of the cavities in association with the internal administration of iodides and inunctions of mercury relieved the active symptoms in seven months, the nasal portion of the right lower lid being dragged toward the resultant cicatrix.

The only case of syphilis involving the lachrymal gland was reported by Chalons [13] in 1859, and as no cases have been reported since, its authenticity is doubtful.

"This was in a man and occurred as a secondary symptom in conjunction with iritis and an exanthematous eruption. These glands became swollen and pushed the upper lids forwards and downwards, forming ptosis. There was no pain and the swellings subsided under mercury."

Taylor [68] mentions several suspicious cases which yielded to iodide of potassium but the diagnosis was in doubt.

The skin of the eyelids may be involved in the same form of lesions as on other parts of the body. Chancre is seldom met with. Of 1646 cases of indurated chancre reported by Sturgis, [65] the lesion was situated on the eyelid in but six. The chancre may occupy any part of the external or internal surface, and may be superficial or extend to all the tissues of the lid [Loring]. [37] It most frequently occurs on the delicate skin of the margin, beginning as a papule which soon breaks down leaving the usual excavated ulcer with a hard base. "The only guide to a certain diagnosis is the rapid development of an adenitis in the preauricular and the submaxillary glands." [Zeissl.] [74]

I have seen but one chancre of the eyelid which occurred on a negro man in Dr. J. Ford Thompson's[69] clinic in Washington, some years ago. Unfortunately I have no notes of this case. Bull,[8] Zeissl,[74] Mackenzie,[41] and others have reported cases. Chancroids have been seen upon the lids by Galezowski,[25] Hirscher,[28] and others.

Through the kindness of Dr. F. W. Marlow, of Syracuse, N. Y., and through that of Mr. J. B. Lawford,[35] opthalmic surgeon at St. Thomas's hospital, [Moorfields] London, I am enabled to give the following case and illustrations. (See Figs. 2-3.)

A married woman aged 50 had been nursing a syphilitic child, not her own. She had noticed a sore upon the right lower lid two or three weeks before coming under observation. The lower lid was much thickened, with a brown scab, with no evident aperture beneath the scab. The conjunctiva of the lid had a grey color, but no pellicle could be peeled off. The preauricular gland was enlarged. Two weeks later the submaxillary gland was enlarged and the preauricular was greater. The ulcer on lid was extending. The sore gradually got softer and extended inwards.

About six weeks from her admission to the hospital, there was a rash

FIG. 2.—*Chancre of the Eyelid.* (*From Photograph.*)

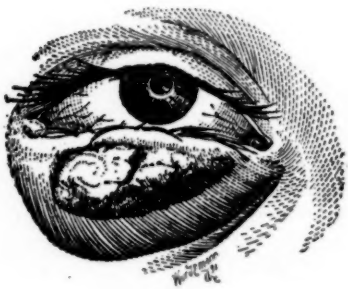

FIG. 3.

on the body and extremities. Sore throat was complained of and the fauces were red. In about eight weeks she left the hospital with the sore healed but with other symptoms of constitutional disease. She was treated internally by mercury and by lotio nigra to the sore.

The syphilides present no distinctive features in this locality.

I have noticed the papular eruption on the eyelids of luetic infants, and in some instances they have been red and swollen. In a case of secondary syphilis in a male negro the pustular syphilide affected the skin of the face and eyelids.

Condylomata of this locality are with difficulty to be differentiated from epithelial cancer. [Walton.][70] In syphilis the

skin is darker, the edges softer and less elevated, and the surrounding skin not so glued down to the parts beneath as in cancer. They sometimes cause complete destruction of the lid, as in a number of cases collected by MacKenzie.[41]

Loring[37] reports such a case in a lad, aged 19, affected with syphilis of the lachrymal passages and nodes on the tibia. His disease was traced to a chancre contracted three years previously.

The tertiary lesions of syphilis affect the skin of the eyelids as well as that on other parts of the face, and as this form is characterized by extensive destruction of tissue, the deformity produced may not be inconsiderable. Single tertiary ulcers have not been observed to occur alone, but are accompanied by ulceration of the skin of contiguous areas.

I remember a patient in Prof. Neumann's[51] clinic in Vienna who had lost the greater portion of the skin of his face, through tertiary ulceration, and with it that of the eyelids.

Hutchinson[31] speaks of meeting with a form of blepharitis in congenital syphilitics which was characterized by the formation of small ulcers at the ciliary margin of the lids.

Infiltrations into the subdermal areolar tissue do not always ulcerate, but may remain for a long time as nodules, and bear close resemblance to chalazia. These soon yield to internal treatment. [Loring.][37]

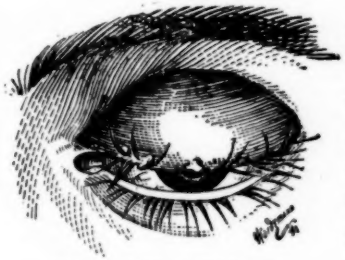

FIG. 4.— *Titisars Syphilitica.*

Inflammation of the tarsal cartilage is generally due to syphilis. It is caused by inflammatory infiltration of the cartilage itself, and is usually confined to that structure. The lid may be greatly thickened without the skin being involved, though the latter is generally reddened. It is not specially painful except in cases where abscesses form. The latter point and break at the edge of the lid. The affection is usually followed by loss of the cilia.

I have had the opportunity of seeing two cases of this somewhat rare disease. The one at Dr. F. B. Loring's[35] clinic, in a mulatto girl aged 13, the subject of congenital syphilis. In the same eye an obstinate interstitial keratitis existed, which afterwards left a large leucoma. The enlargement of the tarsus and the ptosis was permanent, and treatment was of little avail. [See fig. 4.]

The other case was at Dr. Swan M. Burnett's[12] clinic, in a negro girl aged about 15, who was at the same time attending the venereal clinic of Dr. Thompson,[69] for some "blood disease," as she said. This was probably a secondary lesion, although in this case I cannot vouch as to the existence of syphilis.

Actual syphilitic lesions of the conjunctiva are rarely seen, those cases that have been reported being mostly condylomata. It may be the site of a luetic manifestation in any stage of the systemic disease. I have noticed in several cases of chronic catarrhal conjunctivitis, where the patients acknowledged syphilis, that topical applications did little good, but when the general effect of the specific treatment was apparent, the local affection was much improved.

A man, aged 24, came to me, complaining of failing vision, specks before the eyes and smarting lids. He had a chancre eight months before, followed by slight alopecia, sore throat and a papular syphilide of short duration. He had been under specific treatment, but now was taking a simple tonic. I found a moderate degree of conjunctival irritation with the usual secretion of mucous, which was the cause of the muscæ. Astringents were applied with but little effect and it was only upon the renewal of the specific treatment by his physician, some weeks later, that any progress was observed in the local disease. A careful ophthalmoscopic examination was made, but no other lesion could be recognized. The patient suffered, some six months later, from an attack of chorio-retinitis in which the sight was at one time reduced to perception of light, but under strong specific treatment he recovered full vision.

This subject has received close attention in the last few months. Alt[2] reports four cases of chronic and recurrent hyperæmia of the bulbar conjunctiva which he believes were due to syphilis. Goldzieher[26] describes two cases as a lymphadenitis of the adenoid tissue of the conjunctiva and figures the disease as being granular. Macauley[40] and Sattler[57] have described similar cases, the latter claiming that the granules consist of endothelial cells and are not trachomatous. His description answers to that generally given for follicular conjunctivitis. [See recent paper by the author.][72]

An obstinate type of catarrhal conjunctivitis is sometimes met with in specific cases where iritis has been present. In such cases there is no certainty that the local lesion is the result of syphilis. [Bull,[8] Mauthner,[49] Lang,[34] Alexander.][1]

In infantile syphilis a blenorrhœa is sometimes present which is distinct from gonorrhœal ophthalmia, but which like the latter may result in corneal ulceration and even loss of the eye.

Although the primary lesion is usually situated in other localities, yet it has been found on the ocular membrane, the virus having been carried thither by the finger or even by the act of kissing. Chancre of the conjunctiva has much the same appearance as that of the prepuce, having the same excavated, indurated edges and the characteristic coating of pultaceous exudation. The diagnosis is made by proof of the infection, and by swelling of the neighboring lymphatic glands, the preauricular, the parotid and the sublingual. The implication of the preauricular gland is regarded by authorities as a certain sign of syphilis. [Zeissl,[74] Noyes[53] et al.] The locality of the lesion is usually at the ciliary margin of the lids or in the cul-de-sac.

The most recent case of which I can find any mention was reported in 1890 by Marlow.[42] A widow, aged 47, came to him with a swollen and painful left upper lid which had existed for one week. Near the inner canthus a deep, circumscribed induration could be felt. The lid could not be everted and overlapped the lower. The preauricular gland was much enlarged. Ten days later a ragged ulcer could be seen in the palpebral conjunctiva which extended from the margin of the lid at the inner canthus to the retrotarsal fold. The pain was slight, the preauricular gland was larger and the glands under the left side of the jaw were swollen to size of a small orange. The fauces were congested and there was a slight eruption on the nose. The patient's daughter was the mother of an illegitimate child, the subject of severe inherited syphilis, covered from head to feet and down to the finger tips with a papulo-squamous eruption. The grandmother had been taking care of the child, whose fingers had come in contact with her eye and thereby infection had taken place.

Bull[8] describes the following: A young man came to him with an inflamed and swollen lower lid. He denied any infection and had never had symptoms of a venereal disease. On everting the lid, deep in the cul-de-sac, about a quarter inch from the external canthus was an ulcerated surface with a hard base, covered by a grayish, pultaceous matter, the induration extending for some distance on every side. The ulcer was irregularly oval, about a half inch in its longest diameter and extended upwards into the thickened ocular conjunctiva which was intensely congested. The preauricular gland was enlarged and tender; later the symptoms appeared in the parotid and submaxillary glands.

The sore healed in three weeks, and nine weeks later a roseola and other symptoms including monocular iritis appeared.

Boucheron [6] and Schmidt-Rimpler [60] reported cases in which the means of contagion was a kiss from the lips of a person with mucous patches. The former speaks of a physician who inoculated his eye by rubbing it with his finger, to relieve itching while examining a syphilitic. Fuchs [23] has seen [*sic*] cases in infants where the disease had been communicated by the nurse moistening the child's lids with her saliva, which is a custom among the Austrian peasantry. Interesting cases have been reported by Galezowski, [23] Desmarres, [14] Sturgis, [65] Dietlen, [15] Nettleship [50] and others.

The secondary lesions that appear on the conjunctiva are less rare and numbers of cases have been reported. The diagnosis is established, as in the case of the chancre, by the fact of infection, by the implication of the neighboring glands and also by the co-existence of general disease. They are coincident with the appearance of syphilides and affections of the mucous membranes. Eruptions may appear as in the following cases:

Sichel [61] describes a syphilitic papular eruption of the conjunctiva in a man aged 23. He saw it at the beginning of the disease when no photophobia or pain was present. There was limited congestion of the conjunctiva between internal and external recti of the left eye. In the center of the patch was a small reddish-yellow tumor, the size of a grain of wheat. Ten days later the swelling was 13x6½ mm. The cornea was not involved. The surface of the tumor was excoriated and in the depressions was a little mucous. The patient gave a history of syphilitic infection some weeks before. The case was seen by Ricord [56] and Fournier [21] who diagnosed a papulo-ulcerating syphilide of the conjunctiva. Under mercurial treatment the eye became normal in a month. There is no mention of subsequent symptoms.

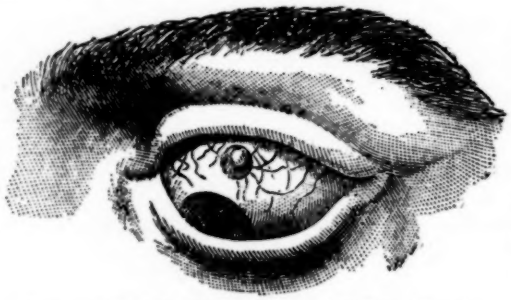

Fig. 5.—*Syphilitic Pupule of the Conjunctiva.* [*Savy.*]

Savy's [58] case [see Fig. 5] had an obstinate lenticular eruption about the body. The eyelids were red and inflamed, the lashes had fallen off and there was a papular eruption on the under surface of the lids. A syphilitic papule had developed on the ocular conjunctiva 3 mm. above the cornea. A cure was obtained after three weeks specific treatment

Condylomata may appear as tawny, slightly elevated, moist surfaces, similar to the same lesions on the penis. These show a tendency to ulcerate as in other localities, and have been taken from their appearances to be chancroidal in nature.

A typical instance has been described by Bull [8] as follows: A young man came for iritis and, upon further examination, was found to have a general papular eruption. He gave a history of chancre four months previous which was followed by roseola and sore throat. Two days later the upper lid of the left eye was swollen and tender. On everting it a vesicular elevation of the tarsal conjunctiva over center of lid was seen. The next day this was quite resistant to the touch. The process extended steadily until six days later the signs of a mucous patch were unmistakable. It was oval, somewhat over half an inch long, its greatest diameter corresponding to that of the lid, but not reaching the ciliary margin. It had the reddish-gray moist surface we are accustomed to see. This subsequently ulcerated, becoming red and painful, extending superficially and acquiring an offensive discharge. It eventually healed, although very obstinate, the resulting cicatrix producing slight entropion.

The tertiary form of conjunctival lesion occurs as a gummy infiltration. This may be either circumscribed or diffuse. Although gumma of the contiguous structures is very common, that of the ocular membrane, limited to its tissue proper, is relatively rare. In gumma of the sclera or ciliary body the conjunctiva is usually implicated.

Among a number of reported cases, I select the following as an example: Briere [7] describes a man aged 25, who had the initial lesion four years before, followed by a papulo-tubercular syphilide which lasted a long time. Then appeared tertiary symptoms as exostoses and periostitis, intense cephalalgia, facial palsy and a disordered mind. Caries of the facial bones followed, and later came a marked injection of the conjunctiva of the right eye which was accompanied by intense photophobia and lachrymation. On lifting the lid and causing the patient to look down, there was seen a tumor in the conjunctiva of a yellow color and firm consistence, about the size of a large bean, six mm. from the limbus, between superior and external recti. Under antisyphilitic treatment the growth diminished and one month later there was but a slight thickening of the membrane at the diseased spot

The rare form of conjunctival discoloration or blotch described by Smee [6a] and France [22] was probably of the same gummy nature. [8] It was very obstinate, slightly raised above the conjunctival surface and showed no dispostion to ulcerate.

These secondary and tertiary forms of conjunctival disease are interesting in that they sometimes occur as isolated symp-

toms of constitutional syphilis. "The patient may have been free from all symptoms of diease for several years, when suddenly the conjunctival lesion makes its appearance, runs its course, is healed, and again the patient is free from all symptoms." [Soelberg Wells.][71]

Lawrence[36] cites the case of a man who had a large dirty-white ulcer on the tarsal conjunctiva of the upper lid, and who had no other symptoms of syphilis for three or four years. Bull[9] describes a similar case.

I can find no mention of congenital syphilis of the conjunctiva beyond the infantile blenorrhœa already described and one case of ulcer reported by Lawrence.[36] Chancroidal ulceration was reported by Hirscher[28] in 1866 and by Galezowski[25] in 1872. These are the only cases and were possibly gummatous.

The sclera is occasionally involved in acquired syphilis. In the secondary stage we may find an episcleritis which resisst local treatment, but which is otherwise difficult to differentiate as a specific process. [Sturgis.][64] It is accompanied as in the non-specific form by pain and photophobia. The affection begins as a rose-colored or violet patch of injection at the outer part of the eyeball between the insertions of the recti muscles. This is slightly elevated and involves solely the episcleral tissue and the overlying conjunctiva. Spots may appear at any part of the anterior selerotic which may coalesce until the greater part of the structure near the cornea is affected. [Bumstead.][11]

Scleritis profunda is a much more serious affair, although in a slight form it only appears as an injected violet colored patch on any part of the sclera, unaccompanied by pain or photophobia. Other cases begin with pericorneal injection which gradually extends back until the whole anterior zone of the ball is involved. The iris and ciliary body become involved and the cornea gradually grows opaque in a characteristic manner, the base of the opacity resting upon the sclera, its apex projecting forward to the center of the cornea.

[Hyde.][32] Interstitial or deep scleritis may undergo resolution or the patch may degenerate into an ulcer with irregular edges and soft, grayish floor. The disease is very obstinate and may be fatal to vision. I have had no experience with such cases.

Gumma of the sclera begins as an interstitial deposit with elevation, redness, etc. It spreads to the deeper structures and leads to destruction of the eye. In the latter stages it is accompanied by violent pain. The sclera is usually implicated in gumma of the ciliary region.

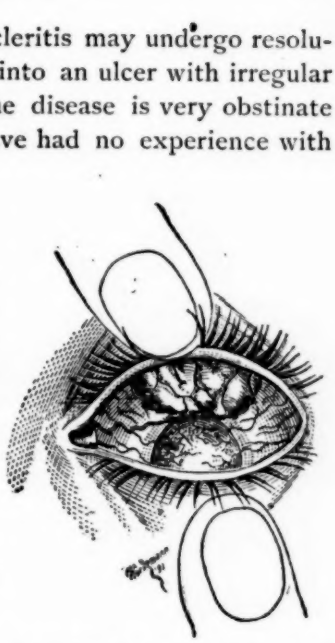

Fig. 6.—*Gumma of Sclera and Ciliary Region.*

It has been my fortune to see a case of scleral gumma of the ciliary region whose history showed that it had begun as above described. This was in a married woman aged 30, who gave a specific history. The eye was eneucleated by Dr. Coe, of Washington, with my assistance, on account of the uncontrollable pain. Upon examination of the specimen the disease was found to have involved the sclera principally although the ciliary body was implicated and the lens and cornea were opaque. [See fig. 6.]

The following cut is from the report of a similar case, described by E. G. Loring and H. C. Eno in 1874.[23] [See fig. 7.]

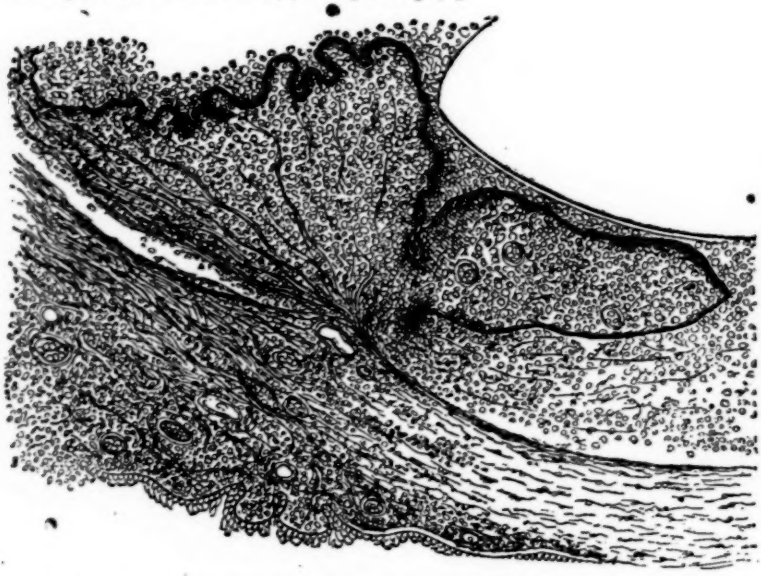

Fig. 7.—*Microscopic Section through Ciliary Region, Showing Episcleral and Ciliary Tumors, etc.* [*Loring and Eno.*]

The primary lesion on the cornea is unknown. Its tissues may be affected in either the secondary or the tertiary stage of the disease, or it may be the site of congenital syphilis. Although the cornea is the seat of a number of non-specific diseases, its venereal lesions are few and, with the exception of interstitial disease, are with difficulty traced to a specific cause. As before observed traumatisms are apt to go badly in these cases, the same as in other systemic states in which the bodily nutrition is lowered. Wounds are more apt to suppurate and ulcers to prove intractable. As most of the important operations are done after a corneal incision, this factor should be taken into account. The cornea may become implicated in syphilitic infants who have blenorrhæa. [Fuchs.] [24] Cases of keratomalacia or general breaking down of the cornea are apt to occur in children with this dyscrasia. [id.] [23] It

seems that the general cachexia has more to do with the corneal destruction than the syphilitic taint. [Dimmer.] [16] The cornea may be implicated in gumma of the contiguous structures. Keyes [33] states that it may become vascular in cases of conjunctival condylomata. Marlow [44] observes, "in some cases of specific iritis, after the acute iritic symptoms had passed off, the development near the center of the cornea of a single, round, soft-edged spot of grayish haze, apparently in the substantia propria, the cornea finally becoming quite clear. In one case there was a stage of keratitis punctata before clearing took place." So close an observor as Dr. Marlow can hardly be mistaken, yet his description might apply to the change in the posterior epithelial layer of the cornea which is frequently noticed in cases of iritis.

The most common syphilitic lesion of the cornea is a deep seated inflammation of the substantia propria. It is claimed by many authors that parenchymatous or interstitial keratitis is in the greater majority of cases of specific origin.

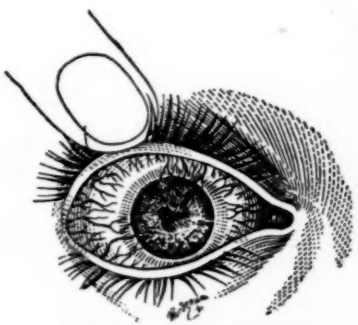

Fig. 8.—Interstitial Keratitis.

Nettleship [50] says: "I have found other personal evidence of inherited specific trouble in 54 per cent. of my cases of interstitial keratitis, and evidence from the family history in 14 per cent. more; total 68 per cent., and in the remaining 32 per cent. there have been strong reasons to suspect it."

In 51 cases of Horner's, [29] 26 had hereditary syphilis, 2 acquired syphilis and in 10 syphilis was strongly suspected, making nearly two-thirds of the number. I have seen typical cases of interstitial keratitis occurring in scrofulous subjects and the same fact has been noticed by others. At present writing I have two such cases under treatment in whom syphilis can be excluded. Arlt [4] distinguished a parenchymatous keratitis due to syphilis, another due to scrofula and a third as due to malaria. The malarial form is however a true keratitis postica. [Noyes]. [52] The superficial form of keratitis more often co-exists in that due to scrofula than in the luetic disease. [24]

Specific keratitis usually attacks both eyes, although worse in one than in the other. A year or more may intervene between the recovery of the first eye and the implication of the second. Two types are distinguished, the vascular and the avascular. [Fuchs].[23-24] The attack begins in haziness of the cornea, either in the center or at the sides. In the vascular form the pericorneal vessels soon become enlarged and the inflammation extends to the episcleral vessels. The cornea clouds and presents the appearance of ground glass in spots where the infiltration is in greater quantity. The pericorneal area becomes somewhat raised from the engorgement. Some of the vessels are continued into and on the cornea, forming leashes and spots of superficial keratitis which are very obstinate, remaining a long time after the diffuse disease is cured. [Hirschberg].[27] The infiltration is principally confined to the posterior part of the substantia propria [see Figs. 8–9.], the spots being dirty yellowish in color.

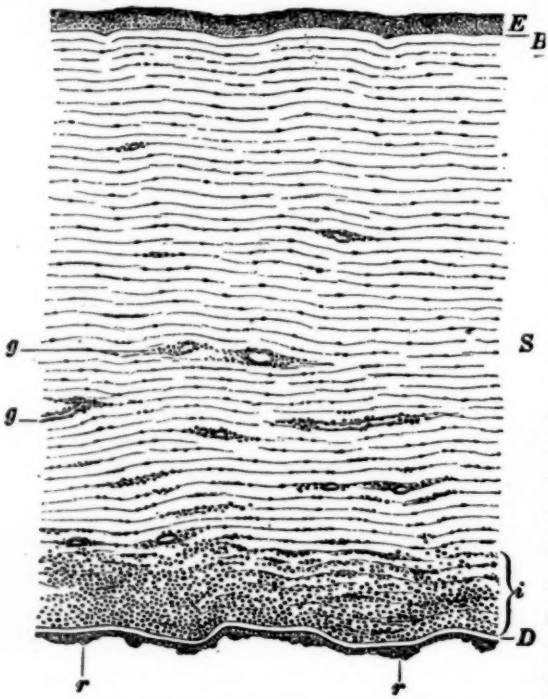

Fig. 9.—Section of Syphilitic Cornea. [*Fuchs.*]
The corneal stroma *S.* is infiltrated, the opacity beginning in the central and being thick in the posterior layers, *i.* The layer of Descemet *D* is thrown in folds and the posterior layer of epithelium is thickened by the deposit of round cells in spots. Blood-vessels *g g* traverse the stroma. The anterior epithelium *E.* and Bowman's layer *B.* are normal.

The aqueous humor becomes cloudy and deposits are formed on the posterior elastic lamella, which is not directly implicated. The posterior layer of epithelium is generally involved when iritis occurs, as this layer is a direct continuation of the outer membrane of the iris. The uveal tract is always implicated and synechiæ, exclusion or occlusion of the pupil may form. In severe cases the whole cornea may be red and the conjunctiva chemosed. After recovery the tissue of the iris may be so atrophied as to be translucent. [Keyes.][33]

The visual acuity is much more diminished than one would judge from the corneal opacity. It may be reduced to recognition of objects held close to the face or even to perception of light, when the cornea is clear enough for the pupillary area to be clearly distinguished. In the mild form there may be but slight photophobia and lachrymation. When the disease is more extensive these symptoms are very severe, and the corneal tissue may become softened, yielding its curve so that under the pressure of the lids a considerable degree of astigmatism is found after recovery. The intraocular pressure is generally lessened, although in rare cases it may be markedly increased, giving rise to irregular astigmatism or even staphyloma. Such is a picture of the vascular form.

In other cases the cornea rapidly clouds over, with but slight circumcorneal injection, which rapidly subsides leaving a dense nebula. In the avascular form the uveal tract is implicated but is only, as a rule, hyperæmic. There are spots of denser infiltration as in the vascular form. The infiltration results in a deposit of white connective tissue in the corneal layer, which may be permanent. [Fuchs.] [23] After the pericorneal injection had disappeared it may be again made visible by a somewhat rough handling of the eye. In both the vascular and nonvascular forms the disease in its declining stage resembles the keratitis punctata presently to be described.

Parenchymatous keratitis may be due in some cases to acquired syphilis. [Noyes,[53] Fuchs,[23] Marlow.[43]] It is

usually the vascular form and is associated with iritis. It has been called keratitis syphilitica punctata profunda from the fact that the infiltration is greater in spots although diffuse opacity also exists. [27] It is to be differentiated from the keratitis punctata superficialis, which is a herpetic eruption [Fuchs], [23] by the cause and locality of the lesion, which is easily seen upon oblique illumination.

In the healing stage of hereditary keratitis the cornea presents the same punctate infiltration. [See Fig. 12.] In congenital disease the lesion is essentially chronic, although acute exacerbations may occur, while in acquired syphilis the symptoms pursue a more acute course. Authorities [23-49-52] agree that girls are more subject to the hereditary disease than boys, the proportion being about two to one. The manifestation usually occurs at puberty, although cases show themselves from the ages of seven to twenty. Noyes [52] reports a case at thirty-three. I have noticed, when the disease occurs earlier than puberty that, after recovery from the first attack, a second will come at that time and a third about the age of 20. Hutchinson [31] says that second attacks are very rare.

"In all cases we have to do with unhealthy subjects, notwithstanding the fact that many do in certain particulars show signs of blooming health. Not a few young girls with unmistakable signs of hereditary syphilis have plump and well rounded forms and rosy cheeks and declare that they feel entirely well." [Noyes.] [52] I think that the specific history of many patients may be traced back through their parents to their grandparents. Mooren [47] has reported several cases which he believes to be derived from their remote ancestors. Thus, in doubtful cases, a clear diagnosis can not be formed. Specific treatment should however be instituted, when often the diagnosis will be confirmed by the reaction of the medicine. The symptoms that can commonly be elicited in patients with parenchymatous keratitis that point toward hereditary syphilis are the following:

I. A peculiar physiognomy and cranium; the upper jaw is flat, the bridge of the nose flat or sunken and the forehead prominent. There is often a blenorrhœa of the lachrymal passages or a hypertrophic rhinitis or ozæna or other change in the nose, the result of previous syphilitic coryza. [Bosworth.][5] Often the intelligence is not normal, the patients being either too precocious or too backward.

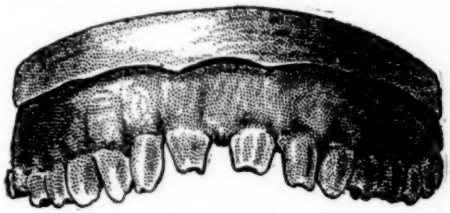

Fig. 10.—*Hutchinson's Teeth.*

II. The peculiar shape of the permanent central incisors of the upper jaw was first pointed out by Hutchinson[30–31] in 1858, and such teeth have since been known by his name. They are usually small, ill-developed, singly notched on their edges and are slanted toward the median line. They are commonly of bad color, but may even be white. Sometimes the incisors of the lower jaw or the lateral incisors of the upper are also affected. The cut [see Fig. 10] is from a plaster cast of a syphilitic and is typical. The vault of the palate is narrow and roof of mouth is a high arch.[52] Although I have seen teeth of this description in children in whom specific disease was negatived, yet they are very common in congenital syphilitics.

Scrofulous or rachitic teeth are frequently met with and are very different from the above. They are notched in several places in the distal ends which are very thin and sharp. They are ridged transversely and are much discolored. [See Fig. 11.] The vault of the palate is commonly broad and flat. Such teeth, however, may be due to arrested development from disease occurring at the time of the second dentition.

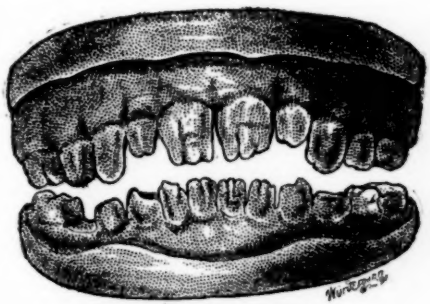

Fig. 11.—*Scrofulous Teeth.*

III. Cicatrices of old ulcerations may be found in the nasal membrane, on the palate or about angles of the mouth.

IV. Somewhat enlarged lymphatic glands may be found in the neck. These are small, hard, and painless and never ulcerate. They are not to be mistaken for the large, soft and caseous glands of scrofula.

V. Exostoses and periostitis which are not painful may be found on the tibia and other long bones.

VI. Commonly the patients are deaf. This symptom becomes worse with each attack of interstitial keratitis.

These symptoms can not all be obtained in every case but enough of them should be gotten together with the interstitial keratitis and a history of ancestral infection if possible before a diagnosis of specific keratitis should be given to the interested parties.

Loring [37] describes a case of acquired syphilitic parenchymatous keratitis occurring as a secondary symptom in a woman aged 20. Three months before, she had a secondary eruption on the legs, arms and neck. The patient complained only of failing vision in the left eye. There was no pain or any symptom beyond a clouding of the cornea. This seemed at first glance to be clear but on examination by oblique illumination it was seen to be full of minute, dirty yellow dots. The trouble continued without inflammation for over three months and only on catching cold was there any pain or pericorneal injection. The disease disappeared under anti-syphilitic treatment. Hutchinson [31] mentions a case of most severe keratitis occurring as a secondary symptom, which resisted treatment for a long time but finally recovered.

Marlow [43] sent me two very interesting cases of acquired keratitis occurring sa a tertiary symptom. A woman, aged 57, contracted syphilis in a rather round-about way as follows: Her daughter had a primary chancre of the lip in 1882, the infection having been without doubt obtained from a public drinking fountain. She was married some eight months later and in due course gave birth to a female child which developed at the age of six months symptoms of inherited syphilis. The grandmother had a large share of the care of the child and became infected with the specific virus and reported to a physician for treatment in July, 1886, who described her symptoms as secondary. The following year she developed tertiary symptoms and, in October of 1888, came to Dr. Marlow with a well pronounced interstitial keratitis at lower and central part of the right cornea. The haze was patchy, but there was no punctate keratitis. The left eye was amblyopic from an extensive retinal detachment which had existed for years. There were opacities in the vitreous. The cornea clouded all over and leashes of bloodvessels formed in its tissue. The disease passed away as a keratitis punctata. Two years later the patient developed symptoms of cerebral disease and died.

The other instance occurred in a man. aged 39, who gave a history of syphilis developing twenty years before, for which he had undergone constitutional treatment of about two years. For five years past the left pupil had been dilated and the right had been in a similar condition for two years. There was no action to light, but fair contraction with accommodation. He noticed that distant vision had failed after a vacation in which he had been on the water considerably. The examination showed in the right eye a diffuse haze and in the left a patchy opacity of the cornea. There was ciliary congestion in both eyes. Keratitis punctata developed in both corneæ in the declining stage and finally disappeared.

I have recently had in my care a patient who presented the typical appearance of vascular keratitis. (See Fig. 8.) This was a girl of sixteen, whose rounded figure and rosy cheeks seemed to proclaim her the perfect picture of health. The father had led a rather loose life, and the mother had died in the

infancy of the child. She had one brother who was inclined to be sickly. The history of an eruption on the skin and of an inflammation of the left eye in her infancy was obtained. The right eye had an attack of the same trouble as at present about three years ago, and upon subsidence the left had become affected. Upon examination the left cornea was found typically clouded with patches of denser opacity and with leashes of blood-vessels running from the engorged pericorneal vessels to them. There were spots of superficial keratitis and the tension was lowered. Considerable lachrymation and photophobia was present. The physiognomy was not typical, still the forehead was prominent, the teeth were notched, there was a chronic naso-pharyngeal catarrh and the lymphatics in the neck were enlarged. The vision was reduced to perception of light and shade. In the course of ten days the cornea had sufficiently cleared under local and under specific treatment that the pupil could be seen. Later the iris was seen to be translucent in spots, and to be bound down to the anterior capsule of the lens, forming two small synechiæ. A few days later the patient could count fingers, and in two months the vision was nearly normal. The specific treatment proved the diagnosis, for when it was discontinued for a time the cornea rapidly clouded. The patient grew quite stout under the mercury. During the healing the opacity presented the appearance described as punctate keratitis. (See Fig. 12.)

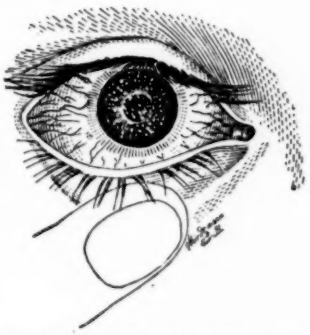

FIG. 12.—*Punctate appearance in the healing stage of Interstitial Keratitis.*

I have notes of a case of the avascular form which I had the opportunity of following during nearly its entire course, A young quadroon came to the Washington Eye and Ear Infirmary with both corneæ quite opaque, The parents said that the trouble had come on without inflammation some months before. The patient had nearly all the characteristic signs of a congenital syphilitic. The vision in both eyes was reduced to perception of light. The anterior epithelium was not involved, the opacity being deep seated. There was not even a suggestion of hyperæmia although when the eye was rubbed the circumcorneal vessels became engorged. The patient was given local and general treatment at intervals for over three years. One year afterward he could see to read and was going to school. Maculæ of the upper parts of the corneæ remained for nearly two years more but finally disappeared. Cortical cataract, which was nonprogressive, was seen in either eye as soon as the corneæ were clear enough for examination by the ophthalmoscope.

Of all the rare forms in which syphilis affects the eye or its its appendages, disease of the orbital bones is probably least often met with, although the other facial bones are fre-

quently the seat of caries or necrosis. The walls of the orbit being in such intimate relation with the delicate organ of vision and with the brain, affections of its bones and of its contents are apt to prove highly dangerous not only to sight but to life itself. Periostitis does not often occur and exostoses, nodes, caries and necrosis are even more rare. The inflammations occurring in the orbital walls are usually complicated by cellulitis, which if not relieved may result in the formation of abscess, panophthalmitis or even death from brain complication. A chronic process may be set up and sinuses formed which discharge for a long time. The patient becomes rapidly reduced from the severe pain and general prostration. Chronic periostitis is most frequently syphilitic. [Bull.] [10] Mracek [48] concludes from the clinical study of six cases that these affections of the orbit are tertiary manifestations whenever they happen in the course of systemic disease. They are either productive, sclerotic or destructive. The first two forms have been mistaken for malignant growths. They produce strabismus, optic neuritis or exophthalmus which may be so great as to cause dislocation of the globe. The products of destructive processes may escape outwards or go through the sphenoidal fissure to the brain. The same event may occur from specific inflammation of the tendons and their fascia. [Bumstead.] [11]

A woman at Moorfields had a large node growing from the inner wall of the orbit; it was perfectly solid to the touch, but pushed the eye outwards and forwards and had caused tension of the optic nerve so that there was loss of sight, a dilated immovable pupil and perfect immovability of the eye. She soon afterwards had severe cerebral symptoms and died suddenly in a comatose condition. [Poland.] [55]

Noyes [54] mentions a case of orbital periostitis confined to anterior part of the orbit accompanied by intense pain. The symptoms first presented the type of a purulent conjunctivitis. There was an eruption on the face and exquisite tenderness of the orbital walls upon digital examination. The symptoms continued some two weeks when the other eye commenced to be inflamed and followed the same course. The patient recovered under local and specific treatment without injury to the eyes.

Evans [18] reports bilateral orbital gummata occurring in a negro woman aged 29, who came to him on account of binocular exophthalmus, first noticed six months before. The left eye was most affected, its cornea dry and shrunken, the conjunctiva greatly chemosed and protruding between the lids until it hung down on the cheek. The right eye still had some vision although the pupil was dilated and the cornea hazy. The retinal vessels could be seen to be engorged. The left eye was pushed directly forwards and the right forwards and outwards. The ocular movements were impeded but no paralysis could be detected. Aside from being a bilateral affection, there was nothing characteristic about the exophthalmus, and no evidence of malignant or specific conditions. The accompanying cut [see Fig. 13], kindly lent me by Dr. Evans, shows tolerably well her condition, except in the right eye the size and shape of the conjunctival mass is not distinctly shown.

FIG. 13.

FIG. 14.

The case was thought at the time to be one of exophthalmic goitre as the thyroid was enlarged, although no cardiac symptoms were present. Three days later the left eye was eneucleated. By digital examination of the orbit a movable tumor about the size and shape of a small almond was found occupying the space between the optic foramen and the inner canthus. No attempt was made to remove the growth with the exception of a small piece for microscopic examination which was reported to be "macroscopically of a yellowish-white color and very soft. Microscopically of a distinctly fibrillated matrix filled with round cells in the outer part, while the inner was made up largely of granular matter, with some fat, some shrunken cells, and poorly outlined bands of fibrous tissue." The case improved under large doses of iodide and a few months later the sight of the right eye was restored and the patient presented the appearance as in the illustration. [See Fig. 14.]

I have lately seen a case of metastatic abscess and cellulitis of the orbit in a patient who had chancroids followed by double ulcerating buboes of the groin. I can find no literature bearing upon the subject and the case is certainly unique. Syphilis could with certainty be excluded. The case resembles mycotic thrombosis occurring after gestation and was probably of the same nature. It is hardly possible that the eye affection was due to the virus.

The patient had been in the ward for some weeks. The glandular abscesses in the groin had been opened and antiseptically dressed by Dr. D. J. Hayes, the attending physician. The patient was much reduced and had a temperature of 101° for some days before I was called to attend the ocular affection. He was kept under morphine on account of the intense pain. The disease had commenced as iritis several days before and panophthalmitis soon set in. The temperature rose to 102°–105°, attended with rigors. A noticeable symptom was the rapid development of exophthalmus, which soon made the eye appear dislocated. Suspecting periostitis of the orbit, with pus formation, I made an incision down to the apex with negative findings.

Two days later I eneucleated the eye and released a large quantity of pus from the capsule of Tenon. There was nothing wrong with the periosteum so far as could be learned from digital examination. The contents of the globe were disorganized, the lens opaque and the vitreous a fibrinous mass. The temperature fell to the normal a few hours after the operation, after which he made a rapid recovery and regained his general health. There were no symptoms of any general disease for a year afterwards. [See paper by author.][7a]

Affections of the iris and uveal tract are common in the course of syphilis, but these as well as specific diseases of the other internal structures of the eye will not be considered in this paper.

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SOCIETY PROCEEDINGS.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Thursday, June 11, 1891. Henry Powers, M. B., President, in the Chair.

The Treatment of Squint by Advancement of the Recti Muscles.—Dr. Adolf Bronner (Bradford) read a paper based upon the records of fifty cases of strabismus treated by the advancement of one of the recti muscles, according to the method advocated by Schweigger. In most cases cocaine was the only anæsthetic employed. Dr. Bronner drew attention to the large number of cases of convergent strabismus, in which the external rectus was thin and atrophic. He thought it was of the greatest importance that the size and condition of the muscle should be ascertained as nearly as possible before the advancement was performed. In many cases tenotomy of the antagonistic muscle was necessary and in some tenotomy or advancement had to be performed upon the muscles of the fellow eye. In cases of divergent strabismus tenotomy of the external and advancement of the internal rectus were necessary, and the immediate effect of the operation should be slight convergence. In no case should the same muscle be tenotomised more than once. The author thought that advancement of the muscle was the best operation in all cases in which the squinting eye was amblyopic, and in which the angle of deviation measured more than 30°. The advantages of advancement of a muscle over an ordinary tenotomy were that the danger of a subsequent strabismus in the opposite direction was much less, and that the operation aimed at strengthening a weak muscle instead of weakening a muscle previously strong.

The President said that his experience of tenotomy had been satisfactory, and that he preferred the simpler operation in the majority of cases. He had seen but few undesirable results. The cases which he found most difficult to deal with were those of very slight squint with extremly troublesome diplopia.

Mr. Juler thought that Schweigger's plan of tying in two sutures would be likely to set up a good deal of irritation. He preferred an operation which was a modification of Critchett's, and with which he had had good results. He thought advancement of muscles in cases of strabismus was a method of treatment not fully appreciated by many English surgeons.

Mr. Eales (Birmingham) described the method of operating which he adopted; he frequently performed advancement of the recti muscles in strabismus cases.

Mr. Edgar Browne (Liverpool) after referring to the older methods of treatment employed in this country years ago, described the plan he himself adopted. He had found that the operation was simplified by introducing the threads in the reverse way to that usually done, that is, to attach the thread to the conjunctiva or sclera at the point of fixation first and subsequently to the tendon or muscle. He emphasized the importance of fully correcting any astigmatism in cases of strabismus.

Mr. Jessop had found that advancement of a rectus muscle without tenotomy of its opponent was of little value. He preferred to do the tenotomy by Landolt's method before bringing forward the weakened muscle.

Mr. Cowell said that in the operation described he recognized an old friend under a new name. The operation used to be known as readjustment. He had treated many cases of secondary divergent strabismus by this method, occasionally converging the eyes during the first day or two after the operaiton by a suture passed through the skin at the bridge of the nose.

Mr. Lang pointed out that the terms readjusted and advancement of a muscle had different meanings. He thought

it important in this treatment to endeavor to restore binocular vision at the time of the operation.

Mr. Doyne (Oxford) and Mr. Story (Dublin) thought that binocular vision after operations for strabismus was an exceptional result and one which few operators seriously sought to obtain.

Dr. Bronner, in reply, affirmed that Schweigger's method of operating maintained the normal lateral movement of the globe. He had long given up thinking about the restoration of binocular vision in cases of strabismus.

Detachment of the Choroid.—Mr. Story (Dublin) read notes of a case of this rare affection in a man, æt. 29, who had been for more than two years under his care. The patient was kicked by a horse on his right eyebrow and nose in childhood, and some years later was struck by a stone at the outer angle of the left orbit. These injuries seem to have no connection with the loss of sight, which occurred rather gradually in his right eye at the age of 20, and in his left about a year before coming to the hospital. During the two years he has been under observation no important changes have occurred in the state of the eye; slight variations have taken place in the extent of the detachment, and vision has remained pretty constant at fingers at 2 meters in the right and fingers at 4 metres in the left eye. Tension normal, or at times slightly subnormal; media clear except for a nebula on the left cornea, and opacities in both vitreous chambers; discs slightly hazy, and marked perivascular thickenings about all vessels. In the right eye there are two hemispherical detachments of the retina alone, one at the macula lutea about three times the diameter of the papilla, and a large one at the inferior nasal part of the fundus, extending to the extreme periphery. Except at these two places, the choridal stroma is everywhere as distinctly visible as the retinal blood vessels, and everywhere requires exactly the same glass to observe it by erect ophthalmoscopic examination. The refraction of different portions of the fundus is as follows in the right eye. Disc centre — 1, edge + 1. Retinal detachment at macula with irregularity of lamina limitans in-

terna + 8. Choroid and retina at temporal end of horizontal meridian + 12 (a slight retinal detachment more peripherally + 13)- At nasal end + 12, and large retinal detachment more peripherally + 18. Retina and choroid at both ends of vertical meridian +8. Left eye disc + 0.5. Macula + 1.5. Retina and choroid at nasal end of horizontal meridian + 8, and on another occasion + 12, at temporal end + 12. At upper end of vertical meridian + 7 and again + 4, at lower end + 5, Mr. Story referred to the cases of detachment of the choroid already published, and showed in what a remarkable manner the present case differed from all those which have been previously observed.

Temporal Hemianopsia of Left Eye and Absolute Blindness of Right.—Mr. Story (Dublin) gave a further history of a case (not yet published) which he had brought before the Society in 1887. A girl, æt. 19, came to him in 1885 with the right eye absolutely blind, and with complete hemianopsia of the left, the line of demarcation passing through the fixation point. The other symptoms were violent pains in the head, giddiness, vomiting, amenorrhœa, and tendency to corpulence. Since then these distressing symptoms have mostly subsided, but her field of vision remains unaltered, and central vision has considerably deteriorated. Vision which was in 1885 $=^{5}/_{VII\cdot5}$ is now only $=^{5}/_{XX}$ (?) Careful examination has completely failed to demonstrate the hemianopic pupillary reflex. Mr. Story suggested that the case might be one of a tuberculous growth in the region of the chiasma, which had now for some years ceased to increase. Charts of the field of vision, taken at various times during the last six years, were exhibited.

Card Specimens.—Mr. Tatham Thompson (Cardiff); Emphysema of Conjunctiva. Mr. Stephenson: Two Cases of Peculiar Retinal Pigmentation. Mr. Treacher Collins: Epithelial Implantation Cyst.—Mr. Cowell: Congenital Fissure of Upper Eyelid. Mr. Doyne (Oxford): Coloboma of Iris and Choroid, with bulging of corresponding portion of circumference of the Lens.

FRIDAY, JULY 3, 1891.

Perchloride of Mercury in the Curative Treatment of Trachoma and other Conjunctival Diseases.—This paper (by Mr. Kenneth Scott, Cairo) was read by the Medical Secretary. Mr. Scott had had a large experience of trachoma in Egypt, and after trial of several methods of treatment, had decided in favor of perchloride of mercury. He used a 4% solution made by dissolving the salt in glycerine, and then diluting with water. This he applied to the everted lids once a day, and in addition gave the patient a 1/4% solution to be used thrice daily. Iron tonics were usually prescribed during the treatment. Most of the cases were treated as hospital out-patients; a few were admitted to the wards. Mr. Scott's results with this treatment had been very satisfactory, nearly all cases being cured in about eight weeks. A similar treatment had proved very efficacious in ophthalmia neonatorum, the administration of iron being omitted in these cases.

Mr. Mackinlay referred to the fact that the use of perchloride was by no means new. The older writere nearly all recommended it, but the strength of the solution used had varied at different periods.

Mr. Juler was inclined to think Mr. Scott's records were too good to be true. He had used perchloride of mercury in the solid pencil combined with nitrate of potash, with satisfactory results, but his cases were not cured so rapidly as Mr. Scott's.

Mr. S. A. Stephenson said he had an extensive experience of trachoma, and had employed perchloride of mercury in 1% solution. Although a valuable remedy, he did not think it could be considered a specific. He had invented the pencils referred to, their composition being 1 of perchloride and 4 of nitrate of potash.

Mr. Silcock expressed his satisfaction with the perchloride in trachoma, but did not regard it in any sense as a specific for the malady.

On a Peculiar Form of Retinal Pigmentation.—Mr. Sydney Stephenson read a paper on a peculiar variety of pigmentation

of the retina, of which he had observed three cases during the examination of 2,500 eyes. The characteristic ophthalmoscopic appearances consisted of variously-shaped groups, composed of dark-colored spots, arranged over a sector-like portion of the fundus. In each patient (all of whom were males) one eye alone was affected; the sight was normal, and the visual fields not contracted; night blindness was not present. Moreover, though the cases were under observation for a lengthened period, the pigmentary groups remain stationary. A similar condition, Mr. Stephenson stated, is described in Jaeger's *Hand Atlas*, Jaeger regarding the change as an anomalous form of retinitis pigmentosa. Mr. Stephenson, however, relying on the unimpaired visual fields and the non-progressive nature of the the deposits, believed that the condition was physiological. He was inclined to think that the pigmentary changes described are allied to those small aggregations of retinal pigment which may be found in 8% of healthy eyes, and, in explanation of both these conditions, suggested that the development of pigment cells in the proximal plate of the optic cup had overstepped its usual limits, and in this way produced the changes in question.

Mr. Jessop asked the position of the pigmentation. From the drawings shown he thought the changes were chiefly in the region of the choroidal cleft.

Dr. Anderson referred to cases of his own mentioned by Dr. Stephenson; and showed a drawing of the right fundus oculi of a boy, æt. 15, suffering from rheumatic endocarditis, which exhibited groups of pigment deposits, each deposit being angular in shape. The left eye of the same patient contained a large mass of homogeneous black pigment on the nasal side of the optic disc. He had come to the conclusion that the changes were congenital and physiological.

Mr. Frost said that the physiological or pathological nature of the pigmentary changes could be determined only by noting whether they were progressive or stationary.

Mr. Nettleship thought that the normal appearance of the choroidal pigment epithelium in Mr. Stephenson's cases was

good evidence of the physiological nature of the pigmentation. He was not cognizant of any retinal or choroidal pigmentation of pathological origin in which the hexagonal pigment layer remained unchanged.

On the Consensual Pupillary Light Reflex in Cases Exhibiting the Argyll-Robertson Pupil Sympton in one Eye.—Mr. Jessop read notes of five such cases (three occurring in Dr. Ormerod's practice); three were cases of tabes, one doubtful tabes, and one probably sclerosis of posterior and lateral columns. In all, though the contraction of the pupil associated with accommodation was present in both eyes, the direct and consensual light reflex was lost in one and the same eye. In all the cases, also, the consensual light reflex was present in the sound eye, thus showing that the optic nerve of the affected eye was capable of carrying impulses to the light reflex center of the opposite eye. The lesion in these cases is probably one affecting the light reflex center for one eye near the endings of the afferent part of the reflex arc. These cases strengthen and uphold the theory of the decussation of the optico-pupillary fibers.

Two Cases of Complete Blindness, with good Pupillary Light Reflexes.—Mr. Jessop related two cases. The first was a boy, æt. 16, with history of two and a half years' blindness, suffering apparently from "cerebral tumor." Both optic discs were white and atrophied, with small arteries. The pupils were very active to light, both direct and consensual, and also acted to accommodation and convergence. The second case was a man, æt. 34, who had been blind for six months, with loss of knee-jerks. The optic discs were atrophied, with small retinal arteries; the direct and consensual light reflex was present, and the pupils contracted with convergence and accommodation.

Nystagmus in a Compositor.—Mr. Snell (Sheffield) brought forward this case. The patient, æt. 21, had just completed his apprenticeship, and was engaged on the staff of a large daily paper. He came under observation on October 17, 1890. His work for some months had been heavier than usual, the hours from 7 P. M. to 3 A. M. Two days before coming to Mr. Snell

he returned home from work, went to bed, and rose as usual at 12 (noon). Then he noticed objects moving up and down, with some giddiness, but no pain in the head nor sickness. The nystagmus was found to be vertical, and the movements were rather jumping; there was quivering of eyelids. He was carefully examined for any central or other lesion, with negative results. The absence of any assignable cause and the resemblance in some particulars to miners' nystagmus suggested inquiry as to the way his work was performed. He was visited at the printing office, which was of course well lighted, and it was found that when he looked up to his "copy" instead of raising head and eyes together, he elevated the eyes only. This was fully described. Anyone trying it will find out how trying it is. Other men at work raised the head with the eyes. The patient gradually recovered, the oscillations disappeared, and he returned to work on December 30, He now works with comfort, having adopted the suggestion as to raising his head at the same time that he looks up from the type to the "copy." Quite recently he has developed "compositors' cramp" in the right hand, and is incapacitated thereby from doing his work. Mr. Snell alluded to his views as to miners' nystagmus having for its prime cause the constrained position in which coal-getters worked. He mentioned instances occurring in men (not practical colliers) working at the pit bottom in good light, whose gaze was constantly turned up as the cage ascended and descended. Nystagmus, Mr. Snell thought, would probably be found associated with other occupations occasionally. Writers' cramp has been followed by the recognition of many similar conditions. The mention of this compositor's case would perhaps lead others to recognize more clearly the connection of nystagmus with occupation.

Immediate Loss of Sight of Both Eyes after Injury to Head.—Mr. Snell (Sheffield) related this case. The patient, æt. 19, was on December 12, 1890, crushed under a cage in a coal pit; the cage weighed five or six tons; it struck his head and then pressed him down, laying him out almost flat. He lost consciousness, and bled at the nose and ears; his face and eye-

lids were swollen, and when he could open the eyes the conjunctivæ were deeply ecchymosed. On recovering consciousness he found that he was perfectly blind, and he has remained so since. When seen first by Mr. Snell on March 24, the optic discs were decidedly whitened; but Mr. Jones, of Wath-on-Dearne, who had examined the patient with the ophthalmoscope between two and three weeks after the accident, was unable at that time to detect any definite change in the color of the discs. Mr. Snell said the interest of this case lay especially in the loss of vision in both eyes. He alluded to Holder's important data as to the frequent implication of the vault of the orbit and optic canals in fractures of the base of the skull. In this case the fracture would be far forwards, and involved the optic canals or body of sphenoid; it would also damage the optic nerve or chiasma. The slow appearance of optic atrophy was mentioned as in accordance with experience when the injury to the optic nerve was behind the entrance of the central artery.

Albinism: A Curious Family History.—Dr. G. W. Sym (Edinburgh) sent notes of a family of seven children who were alternately albino and dark. The children, with the exception of the seventh, were all living, and in good health. They had no mental defects. The parents and all other relatives had dark complexions.

Living and Card Specimens.—Mr. Silcock: Epithelioma of Upper Eyelid, Cheek, and Lip.

Mr. Cowell: Case of Acromegaly with Atrophy and Optic Nerves.

Mr. Critchett: Knife for Division of Membrane in Pupil after Cataract Extraction.

Mr. Treacher Collins: Intraocular Growth in a Blind Glaucomatous Eye.

Annual Meeting.—The annual general meeting was held at 9:30 P. M., and the following officers were elected for the ensuing year:

President.—Henry Power.

Vice-Presidents.—James Bankart (Exeter); John Whitaker

Hulke, F.R.S.; John Hughlings Jackson, M.D., LL.D., F.R.S.; William M. Ord, M.D.; D. C. Lloyd Owen (Birmingham); H. R. Swanzy (Dublin); John Tweedy.

Treasurer.—George Cowell.

Secretaries.—Charles E. Beevor, M.D.; A. Quarry Silcock.

Librarian.—W. Adams Frost.

Other Members of Council.—James Anderson, M.D.; G. A. Berry, M.D. (Edinburgh); E. Treacher Collins; F. Richardson Cross (Bristol); Henry Eales (Birmingham); Robert Marcus Gunn; Gustavus Hartridge; Frank H. Hodges (Leicester); W. H. H. Jessop; Herbert William Page; J. A. Ormerod, M.D.; D. D. Redmond (Dublin).

CORRESPONDENCE.

HOMATROPINE.

MACON, GA., Sept. 1861.

EDITOR AMERICAN JOURNAL OF OPHTHALMOLOGY.—I am always interested in the writings of that veteran Ophthalmologist, Dr. J. J. Chisolm, and while I have known for some time of the views which he holds in regard to the efficacy of homatropine in refractive work, I have been patiently waiting for him to announce his change of conviction in this respect; but in his article in your July and August number he reiterates, if possible, more strongly than ever, his opinion that homatropine is all-sufficient, and that the oculist who subjects his patient to atropine is really culpable.

Now I hope Dr. Chisolm will pardon the apparent temerity of a "youngster" like myself, whose experience in ophthalmology dates back about 11 years, but I wish to put myself on record as having to disagree with him as to the efficacy of homatropine in refractive work. The work I have done in this line, I think, I have done with care, and if there is any one fact in refractive work of which I have become fully convinced, it is that homatropine will very frequently fail to fully relax the accommodation.

I have tried it sufficiently, in strengths ranging from 5 to 20 grains to the ounce of water, and many are the times in which the subsequent use of a 4 grain solution of atropine showed that the homatropia had revealed often only as much as $^1/_3$ of the real error, and had marked astigmatism very frequently. Now, if Dr. Chisolm means that he can get along satisfactorily in his refractive work, provided he knows only a part of the

error which his patient possesses, then I have nothing to say. I feel it necessary for me to know what the whole error is. I have given homatropia a sufficient trial, and I sincerely regret having had to give it up. Having to give it up has lost me many a valuable client, who went elsewhere to doctor so and so "who fitted his friend's eyes for glasses and put some drops in them which only blinded him for one day, whereas my drops would blind him for a week." And yet I dont know that this has been any more unpleasant than has been the knowledge that homatropia has caused me to do much of my refractive work wrong. It has often proved exceedingly unpleasant to find that the glasses which I had prescribed for a patient had turned out to be unsatisfactory. It is a very unpleasant thing to undertake to explain to a patient that his accommadation would not yield to homatropine though his neighbor's might, and that he must have a second pair of glasses made. I say point blank: homatropia has so frequently failed to relax the accommadation among my patients that I have (very regretfully) given up the use of it. I sincerly wish we could get some reliable mydriatic other than atropine, for besides the loss of time, etc., entailed upon our patient, I do not ignore the dangers possible in cases where there is tendency towards glaucoma, to say nothing of the very unpleasant toxic symptoms which I sometimes produce with a 4 grain solution.

Dr. Chisolm and myself are both honest men, and I should like to have the views of some of the "wise men from the east," and also the west, as to why and how it is that our opinions are so different in regard to this very important matter.

R. O. COTTER, M.D.